

Serial No. 10/066,764

Docket No. K-0392

Reply dated February 11, 2004

In Response to Office Action dated October 17, 2003

**IN THE CLAIMS:**

1. (Currently Amended) An optical switch comprising:

a first substrate;

an input optical fiber part attached to the first substrate, wherein the input optical fiber part comprises a first fiber part support substrate;

an output optical fiber part attached to the first substrate and positioned at a distance from the input optical fiber part, wherein the output optical fiber part comprises a second fiber support substrate;

a first micro-mirror part attached to the first substrate and positioned between the input optical fiber part and the output optical fiber part, for reflecting a light from the input optical fiber part, wherein the first micro-mirror part comprises a first micro-mirror support substrate; and

a second micro-mirror part attached to the first substrate and positioned to reflect light from the first micro-mirror part to the output optical fiber part, wherein the second micro-mirror part comprises a second micro-mirror support substrate;

wherein at least two of the input optical fiber part, the output optical fiber part first fiber support substrate, the second fiber support substrate, the first micro-mirror part support substrate and the second micro-mirror part support substrate are mechanically coupled to respective alignment grooves formed in the first substrate.

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2. (Currently Amended) An optical switch as claimed in claim 1, wherein the ~~input and output optical fiber parts~~first and second fiber support substrates, and the first and second micro-mirror parts~~support substrates~~ are each mechanically coupled to respective alignment grooves formed in the first substrate .

3. (Previously Presented) An optical switch as claimed in claim 1, wherein each of the respective alignment grooves have upper sloped sides, and lower vertical sides, to form a 'Y'.

4. (Currently Amended) An optical switch as claimed in claim 1, wherein the at least two ~~parts support substrates~~ are mechanically coupled to the respective alignment grooves with epoxy .

5. (Previously Presented) An optical switch as claimed in claim 1, wherein the first and second micro-mirror parts are arranged to be at 45° to an optical path of the light from the input optical fiber part.

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6. (Currently Amended) An optical switch as claimed in claim 1, wherein each of the input and output optical fiber parts comprises ~~a silicon fiber support substrate, and a two dimensional array of optical fibers coupled to the fiber support substrate, and each of the first and second micro-mirror parts comprises a silicon micro-mirror support substrate, and a two dimensional array of micro-mirrors coupled to the micro-mirror support substrate.~~

7. (Previously Presented) An optical switch as claimed in claim 1, wherein the input and output optical fiber parts are arranged in a parallel arrangement as one bundle, so that the optical axis of the input and output optical fiber parts makes a 45° angle with respect to each of the first, and second micro-mirror parts.

8. (Canceled).

9. (Currently Amended) An optical switch as claimed in claim 7, wherein the ~~input and output optical fiber parts are coupled to first and second fiber support substrates comprise a common substrate.~~

10. (Previously Presented) An optical switch as claimed in claim 9, wherein the common substrate is attached to an alignment groove formed in the first substrate.

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11. (Previously Presented) An optical switch comprising:
- a first substrate;
  - an input fiber array supported by a first fiber support substrate;
  - an output fiber array supported by a second fiber support substrate;
  - a first micro-mirror array supported by a first micro-mirror support substrate, positioned to reflect light from the input fiber array; and
  - a second micro-mirror array supported by a second micro-mirror support substrate, positioned to reflect light from the first micro-mirror array towards the output fiber array;
- wherein the first and second fiber support substrates, and the first and second micro-mirror support substrates are each supported on the first substrate by respective alignment grooves formed in the first substrate.